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# Memories in public speaking performance anxiety reconstructed: a qualitative exploration using a cognitive and etiological model

## ORIGINAL PAPER

Prior research on social anxiety disorder (SAD) demonstrated the importance of anxiety provoking images, which can be related to memories. The present study examines how imagery plays a role in young adults' public speaking anxiety. The experiential intervention imagery rescripting (ImRs), conducted in fourteen participants with public speaking anxiety, resulted in reconstructing memories from adolescence. In order to explore which themes contribute to anxiety provoking images, the study of reconstructed memories focused on the cognitive anxiety process and etiological factors. Qualitative theory-driven analysis of these memories demonstrates that the anxiety process fits the cognitive model on SAD. With regard to etiology, expected influences of negative peer behaviour and parents were small or not found whereas influence of negative teacher behaviour was found. The present results therefore suggest that ImRs could be effective for the specific anxiety group which should be directed on negative teacher behaviour as contributor to their anxiety.

**Keywords:** public speaking anxiety, social anxiety disorder, cognitive model, etiological model, imagery rescripting

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## INTRODUCTION

The concept anxiety in general concerns symptoms at a physiological, cognitive-emotional and behavioural level (Lang, 1993). With regard to performance anxiety, physiological or somatic symptoms include trembling, sweating and blushing which could resemble panic symptoms (Bögels et al., 2010). Furthermore, anxious cognitions include fear of a bad outcome like doing or saying something embarrassing, one's mind going blank, saying foolish things, being unable to continue talking and showing somatic anxiety symptoms (Stein, Walker & Forde., 1996). This anxiety of exposure to others and fear of a critical evaluation is expressed in avoidance behaviour or suffering the situation (APA, 2013). Bögels et al. (2010) define performance anxiety as the fear concerning performing for an audience, including giving a public speech, a music performance or presentations in classes or meetings. It is a subtype of social anxiety disorder (SAD) which constitutes anxiety for general social situations (APA, 2000). Although performance anxiety concerns non-general situations, it shares the same core cognitive concern about being scrutinised and judged negatively (Bögels et al., 2010).

Among other changes from DSM-IV-TR to DSM-V, the subtype performance anxiety became a specifier of SAD (APA, 2000, 2013). This change advanced the differences between non-general and general anxiety in order to better distinguish these types. In comparison to SAD, performance anxiety shows a lower genetic component and a stronger psychophysiological panic-like response to performance situations (Blöte, Kint, Miers & Westenberg, 2009). Moreover, Bögels et al. (2010) argue that performance anxiety has a later onset, can be relieved by  $\beta$ -blockers and has no correlation with personality characteristics such as shyness and behavioural inhibition. Rather, traumatic experiences or panic are important in the development of performance anxiety (Bögels et al., 2010). These findings are not directly related to cognitive and etiological factors underlying performance anxiety. Therefore, it is interesting to look into models and research on SAD concerning these factors, and study whether and how performance anxiety could fit into these models too.

### **Cognitive model**

With regard to SAD, Clark and Wells (1995) modelled the interaction between anxiety responses and processes and showed how anxiety is maintained. Cognitive theory underlying this model states that anxiety elicits automatic inhibitory behaviours and safety behaviour (Beck, Emery & Greenberg, 2005). Assumptions that become activated when entering a feared social or performance situation are about the performers themselves and their (social) world (Clark, 2001; Clark & Wells, 1995). Safety behaviour is referred to as attempts to conceal the anxiety symptoms. This in turn disrupts social performance and can lead to negative evaluation of others. Furthermore, fears are visualised by viewing themselves in a catastrophic situation from an observer's perspective. Concerns provoked by these visualisations or images enhance and maintain this self-focused attention. That is, absent or ambiguous reactions from others will be interpreted negatively, thereby confirming the negative thoughts (Clark, 2001). In cognitive theory, one of

the discussed characteristics of SAD is the image or visualization of a catastrophic scenario (Clark & Beck, 2010). Hackmann, Clark and McManus (2000) show these images are recurrent and associated with memories of 'traumatic' experiences. There can be all sorts of memories which have a pictorial component and can be related to pathogenic early developed beliefs or schemas (Arntz & Weertman, 1999). Thus, images are associated with memories of 'traumatic' experiences (Hackmann et al., 2000). Furthermore, studies on imagery in SAD demonstrate treatment could better target imagery than verbal cognitions (Holmes & Mathews, 2010).

With regard to imagery in performance anxiety, former research did not study memories whereas there are some results in the study on flashforwards, in which future feared situations are imagined and visualised and could manifest as vivid, detailed and distressing (Engelhard et al., 2012). Imagined future catastrophes experienced as intrusive images may fuel distress and avoidance behaviour and are therefore considered to both decrease performance by distraction as well as maintain anxiety symptoms. Combined with the importance of the adolescent age stage, concerning the onset of public speaking situations (Gullone & King, 1993; Stein et al., 1996), it would be interesting to study whether memories also occur in this anxiety and how they contribute to current public speaking performance anxiety.

### **Imagery rescripting**

Based on the results concerning the role of imagery, research focussed on changing the frequency and/or content of images rather than changing verbal cognitions (Arntz & Weertman, 1999; Hackmann, Surawy & Clark, 1998; Holmes & Mathews, 2010). These are referred to as experiential methods in which a change of images is induced by using emotional experience rather than controlled thinking or behaviour (Arntz & Weertman, 1999). One of these methods is Imagery Rescripting (ImRs). The aim of ImRs is to adapt traumatic or anxiety provoking experiences by focusing on new adaptive meanings and by reducing the scope of the old experiences. In order to achieve this, different perspectives and related feelings and needs are experienced in the reconstructed 'traumatic' situation. Ultimately, it is important the client develops the belief that the early experience was an exception rather than the rule, thus changing dysfunctional anxious beliefs (Arntz & Weertman, 1999; Hackmann, 2011).

### **Etiological model**

With regard to memories of socially anxious individuals, external factors could influence the likelihood of developing an anxiety when unpleasant or traumatic events have occurred. Rapee and Spence (2004) address these factors in their etiological model of SAD. They include parent influences, peer influences and actual aversive social outcomes and negative life events. From their point of view, individuals have their own, mostly genetically mediated set point which reflects an individual's level of social anxiety. This epigenetic set point could be altered by the aforementioned environmental influences in a degree dependent of their timing, impact or chronicity. Aversive social outcomes and negative life events themselves

contribute to an increase of the level of social anxiety (Rapee & Spence, 2004).

Peer influence as defined by Rapee and Spence (2004) encompasses negative behaviour of peers in the classroom in the form of rejection and teasing. Studies show that highly socially anxious adolescents are treated more negatively by their peers than non-anxious or low anxious adolescents (Blöte, Kint & Westenberg, 2007; Blöte & Westenberg, 2007). Blöte and Westenberg (2007) examined this by measuring the perception of classmates that functioned as independent observers. Their results show negative class behaviour is based both on the speaker's performance and on the pattern of social interactions that developed in the classroom. The latter constitutes for instance making fun of the speaker, not showing interest and being noisy (Blöte, Duvekot, Schalk, Tuinenburg & Westenburg, 2010; Blöte & Westenberg, 2007). Blöte et al. (2007) replicated the findings with measurements from an independent observer on negative classroom behaviour, in addition to the measurements from the students themselves and the teacher.

With regard to rejection based on the performance of high socially anxious adolescents, Blöte, Bokhorst, Miers and Westenberg (2011) demonstrate this took place within two minutes, even without actual social interaction taking place. That is, only an overall impression in which peers noticed negative features was enough to provoke a negative evaluation. Miers, Blöte and Westenberg (2010) suggest that negative features on which performers are rejected are related to content of speech, facial expressions, posture and body movement and way of speaking. Furthermore, Blöte et al. (2010) studied the role of social skills and overt nervousness of socially anxious students on class behaviour. They found that only social performance predicts negative social responses. That is, peers show negative behaviour towards poor social performance, whereas they do not respond that way at overt nervousness. This is interesting since individuals with speaking anxiety report the (perception of the) visibility of their overt nervousness as a primary factor in their anxiety (Bögels et al., 2010). Taken together, the studies on perception of negative peer/class behaviour suggest a highly socially anxious individual's perception is not distorted. Further, it is related to longer lasting social interactions in the classroom rather than to specific state anxiety characteristics as expected by the anxious individual.

The present study aims to address the question of the extent to which performance anxiety is similar to SAD concerning mental imagery, and the occurrence of 'traumatic' memories. Confirming results might lead to beneficial effects of ImRs for this specific anxiety too. When hypothesizing that individuals with performance anxiety could also link their anxiety provoking images to memories, the next question would be which factors are important and are considered to contribute to the current anxiety. The present study has an explorative character, in which it is assumed that individuals' current public speaking performance anxiety is associated with their reconstructed memories. From the data obtained by imagery rescripting on fourteen young adults with public speaking anxiety, results of the imagery interview adapted from Hackmann et al. (2000) contains the reconstructed 'traumatic' memory and will therefore be used for qualitative analysis. The qualitative analysis will be driven by the cognitive model (Clark & Wells, 1995) and the etiological model (Rapee & Spence, 2004). Overarching themes found across the data will be discussed on their contribution to the current anxiety. This paper

will conclude with a discussion in which findings are translated into directions for altering the existing models and treatment on SAD for a group with public speaking performance anxiety.

The present study addresses the following research questions concerning the expected obtained memories: 1) How can memories fit into the cognitive model of Clark and Wells (1995)? Since performance anxiety shares characteristics with SAD (APA, 2013), it is expected that the cognitive model on SAD is able to explain the process of public speaking performance anxiety as well. 2) What external factors contribute to the negative appraisal of an anxiety provoking experience? Based on the etiological model of SAD (Rapee & Spence, 2004) parents and peers are expected to play a major anxiety contributing role in the memories.

## METHODS

### Participants

After a screening for inclusion criteria, mentioned later in the current section, fourteen participants were enrolled in this study. This number is regarded as sufficient to achieve a complete and broad overview of the studied topic (Guest, Bunce & Johnson, 2006). They ranged in age from 18 to 31 ( $M = 22.64$  years,  $SD = 4.22$  years). Only one participant was male although both sexes could have signed up for the study. The majority of the participants were students of whom two had recently graduated. They were recruited by announcements at different information channels connected with Maastricht University, for instance via flyers at the faculty of Health, Medicine and Life Sciences, via the digital learning environment EleUM and advertisements on social media. In the recruitment text they were asked to participate in a pilot studying a new intervention for public speaking anxiety. It was well communicated that no actual speech was expected from them, which could have lowered the threshold to participate. All individuals that signed up for the study received the screening questionnaire Personal Report of Confidence as a Speaker via e-mail to confirm public speaking anxiety (Paul, 1966). Those with a score of 16 or higher were invited to actually participate in the study. This cut-off score was adapted from Paul (1966) and caused several individuals to be excluded from participating.

Before starting the session, participants filled in the PRCS again. Scores here varied from 13 to 29 ( $M = 23.07$ ,  $SD = 4.22$ ). Although one participant scored below the cut-off score, this did not lead to exclusion. This was decided because the score on the first screening was above the cut-off score. Next to the PRCS, participants were interviewed with the SCID-I (Structured Clinical Interview for DSM-IV Axis 1 disorders; Groenestijn, Akkerhuis, Kupka, Schneider & Nolen, 1997). Scores on this test indicated two participants met criteria for SAD. Finally, participants would be excluded when they met criteria on posttraumatic stress disorder (PTSD) and had prior knowledge of Imagery Rescripting (ImRs). A demographic questionnaire including these topics showed no participants had to be excluded based on these exclusion criteria. Fourteen participants in the end met the inclusion criteria.

Table 1 provides an overview of the relevant characteristics of the participants. Participation was rewarded by offering a 12.50 euro voucher or 2.5 credits for psychology students. All participants signed for informed consent. The Ethical Committee of the Faculty of Psychology and Neuroscience, Maastricht University, approved the study design.

**Table 1.** Characteristics participants linked to their age, gender, education, score on the PRCS and diagnosis of SAD.

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Age	20	31	18	20	26	20	21	18	19	20	28	25	23	28
Gender	M	F	F	F	F	F	F	F	F	F	F	F	F	F
Education	b	c	a	a	d	b	a	a	a	?	d	e	c	c
PRCS	25	20	26	29	27	25	23	23	23	25	17	26	21	13
SAD*	yes	no	no	no	no	no	yes	no	no	no	no	no	no	no

a = 1<sup>st</sup> year student, b = 2<sup>nd</sup> year student, c = 3<sup>rd</sup> year student, d = 4<sup>th</sup> year student, e = graduated

? = missing

\* Social Anxiety Disorder as diagnosed by SCID-I

## Materials

The present study will primarily focus on the data on the flashback, the memory, retrieved from the Imagery interview adapted from Hackmann et al. (2000). The entire data collection comprised a complete intervention with the imagery rescripting technique. Due to restrictions in time and the goal of the present study, these data will not be discussed in this article.

### *Personal Report of Confidence as a speaker*

The Personal Report of Confidence as a speaker (PRCS: Paul, 1966) is a self-report scale. It pretends to measure affective and behavioural responses in public speaking situations. The questionnaire is arranged in a true/false format consisting of 30 questions with possible scores ranging from 0 to 30. The score is higher when the degree of anxiety is greater. Half of the items are reversed scored. Daly (1978) found that the PCRS has a high internal consistency (Cronbach's alpha = 0.91).

### *Structured Clinical Interview for DSM-IV Axis 1 disorders*

The Structured Clinical Interview for DSM-IV Axis 1 disorders (Groenestijn et al., 1997) is an individual pen and paper test for diagnosing psychiatric disorders based on the DSM-IV. The interview addresses only axis 1 disorders, e.g. mood disorders, anxiety disorders and eating disorders. Regarding the final diagnosis, the clinical judgement of the researcher is decisive. The scores are both categorical as well as dimensional. Basco et al. (2000) reported a superior validity of the SCID-I over standard clinical interviews concerning the intake. Lobbestael, Leurgans and Arntz (2011) demonstrated a good inter-rater reliability concerning SAD (Cronbach's alpha = 0.83).

### *Imagery interview*

The imagery interview is used to obtain descriptions and meaning of recurrent images that emerge during public speaking situations. This semi-structured interview is adapted from Hackmann et al. (2000) by translating it into Dutch and adjusting some questions to improve the applicability in the present study. That is, some items were deleted and therefore only questions focusing on public speaking anxiety remained. These questions are standardised and asked in a fixed order.

### **Procedure**

The interviews were held in a laboratory at Maastricht University. Participants were first asked to fill in the questionnaires related to the exclusion criteria. The imagery interview (adapted from Hackmann et al., 2000) took approximately 45 minutes in which the therapist obtained a detailed description of this flashback by asking questions like 'what do you see?', 'who is there with you?', 'what do you hear?', 'what do you feel, both in your mind and body?', 'what do you think?' and 'what has led to this situation?'. The participant was instructed to describe this scenario like it happened again in the present. Finally, the participants were asked to rate the memory on vividness and experience of distress. This was executed on a scale from 0 (absolutely not vivid/distressing) to 100 (absolutely vivid/distressing), according to Hackmann et al. (2000).

Detailed information was obtained including mainly the responses of both the participants and other people present in the memory. After the description of the flashback, it was asked to describe how the memorised experience could influence the participant as a person. The same question was asked concerning other people, their relationships and the world in general. Responses on these questions are analysed in the result section in a qualitative regard since they are considered relevant for studying the flashback.

The complete interview sessions had a duration of approximately 2,5 hours. They were recorded on an MP3 player after consent was given and anonymity was stressed. The interview stopped when the entire imagery rescripting session was completed. The duration could vary between participants. This was due to the characteristic of ImRs which states the participant can continue intervening until he or she is satisfied with the rescripted scenario (Arntz & Weertman, 1999).

### **Data abstraction**

All recorded interviews were transcribed by typing them out verbatim. The data set was analysed by thematic analysis as described by Braun and Clarke (2006). It was decided to conduct an analysis that would lead to a thematic description of the entire data set used in this study; the memory described in the imagery interview. Furthermore, Braun and Clarke (2006) define inductive or data-driven versus theoretical or analyst-driven thematic analysis. Initially, this study started coding with an inductive approach. This involved repeated and active reading of the transcripts aimed at looking for patterns of meaning and issues of potential interest in the data. These patterns were listed and given codes for the subsequent coding



phase. Care was taken to search across the dataset and to prevent it being exclusively led by the questions in the interview.

During the coding phase, the data were organised into meaningful groups based on the coding list. Data extracts from all interviews were categorised within codes, preserving a minimal context and a label of which interview it was extracted. This was done because the surrounding data were relevant for interpretation of the core data extract.

After all relevant data extracts were coded, the analysis phase started. In this phase, codes were combined to form overarching themes. These are described in the result section. Finally, it was important to go beyond the semantic surface level and interpret the data. This was done by linking qualitative data organised in themes with existing literature and theory. In this phase the analysis became more analyst-driven since literature search contributed to the interpretation of the data. In particular, themes found across the data were linked to the cognitive model of SAD (Clark & Wells, 1995) and the etiological model of SAD (Rapee & Spence, 2004).

## RESULTS

The analysis across the data resulted in specific themes concerning the relevant topics formulated in the hypotheses. These are listed in table 2. These are structured by using factors of general models on SAD; the cognitive model (Clark & Wells, 1995) and the etiological model of SAD (Rapee & Spence, 2004).

### **Cognitive model of social phobia**

The cognitive model of Clark and Wells (1995) describes several factors that are relevant in the process and maintenance of SAD. Reported anxiety responses and behaviour will be structured by their considered position within this common model.

#### *Memorised (social) situation*

The majority of the provoked memories resembled each other. As shown in table 2, most described memories occurred at the age of late adolescence. The age of adolescence as defined in several studies ranges between 13 and 18 years (Blöte et al., 2011; Blöte et al., 2007; Blöte & Westenberg, 2007). Three described memories occurred at the next age stage (young adulthood) and two were experienced in their late childhood. When the performance was a public speaking situation, this is specifically indicated. The other performance situations included for instance singing or playing an instrument in front of an audience. A couple of memories were about experiences of being bullied and one memory describes receiving criticism. The similarities between all cases are the overall somatic, cognitive and behavioural anxiety responses that were similar to recent anxiety provoking public speaking situations.



Table 2. Characteristics memorised situations, participants linked to their current age, their age during the memory, gender and the situation type.

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Current	20	31	18	20	26	20	21	18	19	20	28	25	23	28
Memory	14	19	14	9	22	15	15	15	18	17	22	17	7	12
Gender	M	F	F	F	F	F	F	F	F	F	F	F	F	F
Situation	S	S	P	B	S	S	S	P	S	P	C	S	P	B

S = speech, P = performance, B = bullying, C = criticism

The performance situations ranged from a scenario in which everybody watched the speaker (actually standing in front of people) to being in the spotlights (literally by performing on stage) to being watched sitting in the classroom and expected to answer a question. The two bullying experiences described the participant to be the target of bullying. Further, the criticism memory described a situation during an internship in which the assessor only provided negative feedback in conversations with the student.

### *Assumptions and negative automatic thoughts*

Participants reported about how they think their audience, peers or teacher have high expectations about their performance. Conditional beliefs about consequences that emerged frequently from the data are in terms of 'If my performance fails, other people think I'm incompetent'. Unconditional negative beliefs that were reported reflect low self efficacy. The majority of the participants thought they could not perform properly.

Participants furthermore reported ambiguous behaviour, for instance silence, gazing and asking questions. They tended to appraise absent or ambiguous behaviour negatively.

### *Processing of self as a social object*

While the data collection was conducted by using an imagery interview, the focus was on processing of the self as a social object. That is, participants were encouraged to visualise themselves in the early experience and looking at themselves from the observer's perspective, accessing the emotional cognition. According to the cognitive model, the focus on internal information generated a negative self-impression (Clark, 2001). Related internal sensations were explicitly mentioned.

### *Somatic and cognitive symptoms*

The participants' responses could be divided into expressions at the somatic, cognitive and behavioural level. Somatic responses that emerged from the data were mostly flushing, chilliness, sweating, head full of thoughts, trembling, elevated heart rate, strange feeling in the stomach, restlessness and nervousness. These responses were explicitly described by most participants.

Some participants related panic-like symptoms to actual panic. Among these symptoms was the feeling of losing control about their anxiety responses. This

perceived loss of control was reported by almost all participants. One case reported a floating feeling which is considered to resemble the panic symptom light-headedness.

One participant additionally reported fear of the internal physical sensations itself. In concordance with literature, this is common for symptoms related to the hyperarousal associated with performance anxiety (Bögels et al., 2010). Cognitive anxiety symptoms typically related to performance anxiety were reported as getting a black out.

### *Anxiety symptom or safety behaviour?*

Some reported behaviour was difficult to categorise as either anxiety symptom or safety behaviour. For instance, thoughts that expressed the urge to escape could be viewed as an anxiety symptom when it is not functionally used. Since it is however also a kind of avoidance, it has characteristics of safety behaviour.

Additional behaviours that were difficult to categorise were exaggerated laughter and fast talking. These behaviours are similar to typical safety behaviour (Clark, 2001). However, it could be questioned to what extent this behaviour is performed to reduce anxiety. Rather it could be an expression of anxious or nervous feelings.

### *Safety behaviours*

When describing the somatic responses, participants also described their attempts to hide these responses in order to prevent other people from seeing them. Further safety behaviour that was reported concerned behaviour which might have provoked negative evaluation, despite it being performed to avoid this.

Taken together, the data concerning anxiety responses are in concordance with symptoms as described by the DSM-V criteria (APA, 2013) and as modelled by the cognitive model of SAD (Clark, 2001; Clark & Wells, 1995).

## **Etiological model of social phobia**

The present study's data revealed themes that can be related to factors described in the etiological model of SAD of Rapee and Spence (2004). Themes will be structured as considered relation to the etiological factors.

### *High set point*

'Could you describe what happened in your life in the period of the flashback?', 'How did you feel about yourself?' These questions were asked after describing the memory and confused most of the interviewees. After the question was clarified, responses were very similar. Almost all participants reported they were insecure and had a low self esteem at the time of the flashback. When asked to extend these feelings, also fear of critical evaluation by others was mentioned. Some viewed the low self esteem as a normal characteristic of puberty, whereas most viewed this characteristic as a contributing factor to their anxiety in that period. In addition, a substantial part of the responses reflected the feeling of being an outsider.

Although negative feelings seemed to dominate, some reported compensating thoughts, for instance 'Nevertheless, I'm not stupid' when obtaining high grades.

### *Parent influences*

Some cases explicitly mentioned the negative influence of their parents, indicating either a lack of support or overprotection.

### *Peer influences*

Except for one, all cases described a situation where there was an audience of peers present. This group varied in size from twenty to 40 peers in performance situations and four to five in bullying situations. While reliving the memory, participants were asked to describe in detail what happened, including peer behaviour.

The most frequently reported response of peers was laughing. This laughing could be divided into laughing at the speaker and laughing with each other. Both were viewed as disturbing and negative behaviour. Other peer or more general classroom behaviour that was described was an uneasy silence and talking to each other. Additionally, imitating behaviour was reported. This resembled the bullying behaviour, with typical features like pushing, laughing and yelling mean things. Although some participants experienced extremely negative peer behaviour, for instance bullying, most reported peer responses can be considered as reflecting normal behaviour. Participants also reported they understood their peers' reactions and did not blame their peers for their anxiety.

### *Aversive social outcomes*

Most participants could not remember the exact onset of their anxiety. They appraised the described memory as contributing to their anxiety that was already present. There were two cases who did not experience anxiety before the described memory.

### *Additional influence teacher*

In addition to parental influence, explicitly negative descriptions of deviant normative behaviour emerged frequently from the data. These held behaviour performed by the teacher or another authority figure. This is contrary to the behaviour that participants reported to expect from them, for instance creating a safe environment, providing constructive feedback and giving support.

Summarizing, the themes revealed from the flashback interviews offer qualitative insights on different aspects of performance anxiety. Overall, the anxiety responses fit into the cognitive model of Clark and Wells (1995). Furthermore, with regard to the etiological factors to SAD as described in the model of Rapee and Spence (2004), peer influence as modelled was found. The expected important role of parents was not demonstrated. Rather, negative influence of teacher behaviour was reported.

## DISCUSSION AND CONCLUSION

The present study examined memories of young adults with public speaking anxiety which mostly refer to performance experiences in their late adolescence. It was aimed to study whether young adults with public speaking performance anxiety could, like socially anxious individuals, provoke memories in which their anxiety was similar to their current anxiety. The present results show these memories could be obtained by conducting imagery rescripting. The goal related to the analysis of these data was to reveal relevant factors that influence the appraisal of the memorised situation and therefore contribute to the anxiety. This was facilitated by using models based on general SAD; the cognitive model of Clark and Wells (1995) and the etiological model of social phobia of Rapee and Spence (2004).

### **Cognitive model**

The present data provide confirming evidence regarding the first research question. The obtained memories fit into the cognitive model of SAD (Clark & Wells, 1995). That is, all factors described in the cognitive model (Clark & Beck, 2010) could be supported by data extracts and are therefore shown to be prominent in public speaking anxiety too. These factors included a memorised (social) situation, assumptions and negative automatic thoughts, processing of self as a social object, somatic and cognitive symptoms and safety behaviours.

Furthermore, some data extracts were difficult to categorise while there was too little information to confirm their exact function. Although the relation between performance anxiety and SAD is confirmed, aspects on which the qualitative differences between the specific and general anxiety are based were not examined in this study (APA, 2013; Bögels et al., 2010).

According to the cognitive model of Clark and Wells (1995), safety behaviour is performed in an attempt to conceal anxiety symptoms. Since the goal is to avoid negative social outcomes (the presumed negative evaluation of others), it is viewed as subtle avoidance behaviour (Clark, 2001; Clark & Wells, 1995). In the present data, this behaviour is indicated by speakers that for instance hold their hands beneath the table to conceal their trembling. However, as Clark (2001) also suggests in his theory, performing safety behaviour itself could lead to a negative outcome and therefore work in contrary to the intended outcome. That is, peers could notice this safety behaviour before the actual trembling of the hands. Consequently, they could perceive this deviant behaviour in terms of negative features which in turn leads to rejection (Miers et al., 2010). Furthermore, characteristics like avoiding eye contact and talking fast could be interpreted as inappropriate social behaviour, although the function of these behaviours is not clear. As shown by Blöte et al. (2007) and Blöte and Westenberg (2007), high anxious performers can provoke negative evaluation among peers. Although paradoxical, safety behaviour could contribute to this too. This is in concordance with the description of safety behaviour in the model of Clark

and Wells (1995) by Clark (2001). The present results therefore suggest a vicious cycle in which safety behaviour is perceived as a social skill deficit that influences global judgements about social competence, which leads to rejection.

### **Etiological model**

Regarding the second question concerning which external factors contribute to the negative appraisal of the actual memorised experience, the model of Rapee and Spence (2004) was used. According to this model, similar to SAD it was expected that parents and peers would play a major role in the provoked memories. However, parents' influence was minimally reported and peers did play a role but were not blamed in playing the most important contributing role to anxiety. What is more, teacher influence was found relevant in performance experiences regarding their behaviour towards the performer. Therefore, in order to describe relevant external factors contributing to performance anxiety, teacher influence is suggested to be added to the etiological model of SAD according to Rapee and Spence (2004).

#### *Parental influence*

Only few participants reported a negative influence of their parents during the described period. Consequently, this influence's importance in setting the set point level of SAD according to Rapee and Spence (2004) is not confirmed by the present data. The reason for this could be related to the age at which the memories in the present data occurred. That is, the present data address late adolescence instead of late childhood and early adolescence on which Rapee and Spence's (2004) findings are based. Furthermore, it could be that the parents did not play a major role in the descriptions of the participants because in the present intervention it was not specifically asked to extend the performance related memory to their home situation. Another plausible explanation is that parental influence is more subtle than other influences and less powerfully linked to unpleasant memories.

#### *Peer influence*

Although peers would be expected to play an important contributing role to anxiety, the results show most peer behaviour was normal or appraised normal by the participants themselves. The effect of peer behaviour on anxiety will therefore be small. An explanation for this finding could be their behaviour was appraised less negative compared to the behaviour of the participant's teacher. Furthermore, it is possible participants could identify themselves more with their peers than with their teacher, which could explain there was no blame directed at their peers' behaviour.

#### *Additional teacher influence*

Almost all participants reported a negative influence of the teacher or assessor in the memory. This factor is not described in Rapee and Spence's model (2004). This might be due to the focus of the model on the etiology of SAD and not on specific performance anxiety. However, in particular concerning performance related experiences, the role of the teacher or assessor could be of more relevance than for the more generalised SAD subtype. Although this teacher role was expected to

be related to fear of critical evaluation, in terms of a bad assessment for instance, the present data show participants report negative behaviour of the teacher as contributing to their anxiety. With regard to teacher behaviour, participants expected teachers to provide constructive feedback and create a safe environment. These expectations of teachers or assessors are in line with research on this topic of Kunter et al. (2013) and Wentzel (1997) who indicate caring behaviour is important in addition to knowledge transmission. It seems they feel teachers or assessors are supposed to perform professional behaviour which could be set as an example for students.

The present study's results showed negative teacher behaviour towards the performer to be associated with an increase in level of anxiety. However, to what extent the teacher behaviour is perceived rather than objectively present could not be measured since data only comprise of the performer's memories. Prior research that did examine student's perceptions of teacher treatment was more objectively conducted by Babad (1990) and later extended and replicated by Blöte (1995). These studies conclude that low-achieving peers were treated differently by their teachers from high-achieving peers. Although the low-achieving students received more help and support, well performing students were more often praised than poorly performing students. These study results are based on general achievement instead of specific achievements, like speaking performance in the present study. Furthermore, these studies' validity of student perceptions still require more attention. Taken together, despite this limitation and the lack of prior research on specific achievements, this study suggests an important role of teachers regarding the development of this anxiety.

### **Limitations and recommendations**

There are a number of limitations related to the interpretation of the data and to the study's design. A first limitation of this study can link to the comparability of the memories used as data. That is, the timing of the memory and its characteristics was not particularly looked into. Although a variation in memories was expected from the imagery interview (Arntz & Weertman, 1999), bullying experiences and performance experiences were not easily comparable. These provoked similar anxiety responses but varied, among other things, on their impact, the degree of emotions provoked, the number of peers involved and the role of the teacher. For the majority of participants, the memory itself did not function as an onset point for the speaking anxiety but rather functioned as an important contribution to the anxiety. Furthermore, the extent of this contribution could have varied between the participants. Nevertheless, it was decided to use all data together in the analysis because this study is an explorative pilot study that focused on the anxiety responses more than on the situation itself. The heterogeneous etiology of memories is in this respect considered interesting.

Another limitation of the present study is the validity of others' behaviour. That is, perceived peer, parent or teacher behaviour could be influenced by the anxiety and by the beliefs or assumptions anxious individuals have. This is for instance illustrated by the negative interpretation of ambiguous behaviour, as reported by

Clark (2001) and as shown by the present results. Since the present study did not involve independent observers of the memory to compare their observations to the observations of the participants themselves, it is not possible to make conclusions about the actual behaviour. This holds for both teacher and peer behaviour that was reported.

Finally, common shortcomings related to the design of qualitative research as discussed in literature and relevant to this study are purposive sampling, grounded theory, multiple coding and respondent validation (Barbour, 2001). Based on the discussion and limitations, several recommendations on future research could be made. In this respect, the age on which participants retrieved the intervention could be discussed. Rapee and Spence (2004) suggest age is important in the transition from a high level of social anxiety to a formal diagnosis of SAD. They argue early to mid adolescence is the age at which symptoms result in impairment to the individual's life. They further suggest this is due to increasing importance of social interactions. During the age stage described by Rapee and Spence (2004), there are still many parental influences, which are followed by an increasingly important role for peers. The present study however examined most memories in late adolescence, except for two cases in late childhood and three in young adulthood. Data that emerged from these memories indicated the teacher becomes increasingly important. In order to obtain an overview of which factors become more relevant in contributing to anxiety at each age stage for performance anxiety, it is suggested to study memories from different age stages of young adults with performance anxiety.

Based on the present study results, it is suggested to focus more on peer and especially teacher behaviour when conducting ImRs on young adults with performance anxiety. Participants indicate a preference for more positive, supporting behaviour from their peers, although it seems they do not expect this from them. This is in contrast to the blame they place on authority figures like teachers and assessors which are expected to set an example. It could be interesting to study the perception of both influencing factors further in depth. For instance, what are specific expectations on teacher behaviour based on and how did these develop? In educating on the interpretation of the exemplary role of the teacher, parents might be important. When studying this topic on actual behaviour, it is further suggested to increase the validity by including objective observers, as in prior research on peer behaviour (Blöte & Westenberg, 2007) and teacher treatment (Babad, 1990; Blöte, 1995).

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